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PERIODICALS

Fertility and Sterility

January 1950, Vol. I, No. 1.—In 1935, under the auspices of the Margaret Sanger Clinic Research Bureau and the editorship of Abraham Stone, the *Journal of Contraception* was born. Five years later the name was changed to *Human Fertility*. Now this in turn has been replaced by *Fertility and Sterility*, the official journal of the American Society for the Study of Sterility. Those who witnessed the birth and development of its predecessor will be sorry to see it go, but this, the first number of the new publication, gives promise of being worthy of its forbears in this field. The earlier journal was concerned primarily with the study of contraception, in theory and practice. As time went on interest began to shift towards the problems of fertility, its investigation and treatment. Now the pendulum has swung still further so that the new journal, as explained in the editorial, will concern itself solely with the study of fertility and infertility, occurring both in man and other animals. This intention is fulfilled in the list of contributions here published. Among eight papers of unequal merit in this issue, that of R. W. Noyes, A. T. Hertog and J. Rock on " Dating the Endometrial Biopsy " is of first importance. The authors base their conclusions on the examination of 8,000 biopsies obtained during a study of sterility. This paper, which is illustrated with admirable microphotographs, is clearly a sound piece of work and a most valuable guide to all workers in this field. The criteria demanded for dating biopsies are laid down, the dates of 300 biopsies are correlated with the onset of subsequent menstruation, and forty of these are further correlated with ovulation as determined by basal body temperature. The authors conclude that " examination of the endometrium during secretory phase gives more information about the time of ovulation, degree of progestational change, normality or abnormality of endometrium than any other single test done in sterility studies." In a brief but competent paper on " the mechanism and control of primate ovulation " Dr. S. H. Sturgis points out that a number of follicles mature during each cycle, but that in primates as a general rule one and one only discharges an ovum, the rest becoming atretic. The thecal cells of these atretic follicles produce œstrogen which helps to maintain the production of L.H. by the pituitary. Thus it seems that these " lost " follicles have a useful function, but the mechanism whereby atresia is produced is not yet understood, Drs. S. L. Israel and O. Schneller discuss the thermogenic effect of giving progesterone to a series of twenty-six female castrates and six regularly menstruating women ; and Drs. J. H. Nodine and W. H. Porloff describe what they regard as an improved technique for the quantitative determination of hyaluronidase in human semen. In a diverting article on " luminescent phenomena of the external female genitalia " Drs. P. H. Macdonald and M. S. Margolese make the startling observation that the external female genitalia exhibit vari-coloured luminescence under ultra-violet light and that these colour variations may be related with sex hormone metabolism. This is new work and demands elaborate apparatus. Pending further investigations judgment must be suspended as to its clinical value.

March 1950, Vol. I, No. 2.—In this number the characteristically blunt and modest paper by Joe Vincent Meigs is worthy of mention, in which he discusses what part the surgeon may be able to play in the relief of sterility in women. He has some interesting things to say about pelvic endometriosis and about the implantation of the distal part of the fallopian tubes into the uterine cornua after removal of the blocked isthmal portion. He stresses the obvious but all too frequently forgotten home truth that the surgeon's prime duty when faced with a sterile pelvis is to be conservative rather than radical. There are two papers on irradiation—the first by Ira Kaplan discusses the therapeutic value and possible dangers of low dosage irradiation of the pituitary and gonads by X-rays. He bases his remarks on a series of 402 cases treated in his own practice, and maintains that with properly chosen dosage and method of administration he has found no evidence of harmful effect on, at any rate, the first and second generation of offspring. In his hands X-ray therapy has produced few, if any, good results in the male, whereas the results in woman, both as regards establishing regular menstrual cycles, and in so far as relieving sterility is concerned, have been definitely encouraging. Many case histories are quoted in support of this, and Dr. Kaplan considers that as an ovarian stimulus and for correcting anovulation and amenorrhia, X-ray therapy is likely to be more effective than treatment with hormones. He makes the interesting observation that quite heavy irradiation of testes or of the pelvis in young women may not result in permanent sterilization. In the other paper Dr. Charles Charny warns about the destructive effect of irradiation on seminiferous tubules, and reports that the response to X-radiation was uniformly discouraging in the few males so treated.

Drs. Edward Davis and William McCune contribute a paper on various methods of measuring the metabolism of sperms in seminal fluid, and Drs. Irving Stein and Melvin Cohen one on the character of ovulatory cervical mucus and the prognostic

significance of the length of time sperm may survive in it. Two short papers on methods of staining sperm conclude this number.

MARGARET C. N. JACKSON.

Human Genetics

March 1950, Vol. 2, No. 1.—1. *Late cortical cerebellar atrophy.*—By R. B. Richter.—In the family reported fifteen examples of parenchymatous cortical cerebellar atrophy of late onset occurred in three consecutive generations. Clinical details are given of three affected members of the family and a detailed description of the histology of post-mortem material from one of them. The family tree suggests that the condition is due to a dominant gene with a higher manifestation-rate in women. The author suggests a subdivision of Marie's hereditary cerebellar ataxia into three types, of which parenchymatous cortical cerebellar atrophy is one.

2. *Breast cancer in one family group.*—By E. J. Gardner and F. E. Stephens.—Investigation of one branch of this family was suggested by a student and of another branch by a doctor who had treated members of this group. The family is therefore highly selected. There is an unusually high incidence of breast cancer in some branches of this family. The follow-up of the younger members of this family may provide some information about the inheritance of cancer of the breast.

3. *Cancer of the lower digestive tract in one family group.*—By E. J. Gardner and F. E. Stephens.—Eight individuals in a family group of 45 individuals were found to have had cancer of the lower bowel, the distribution indicating that a dominant gene is responsible. One living member was found to have polyposis of the colon, and it is suggested that this is the predisposing factor present in this family.

4. *Gaucher's disease in five related Negro sibships.* By C. N. Herndon and J. R. Bender.—Five cases of Gaucher's disease appeared among the great-great-grandchildren of two Negro couples, each of these was in a separate sibship. The parents of three of these children were second cousins with the first couple as common ancestors, the parents of the fourth were second cousins with the second couple as common ancestors, the parents of the fifth case are not known to be related, but one is descended from the first couple and one from the second couple. The authors demonstrate that this is best explained by the hypothesis that the condition is determined by a recessive gene.

5. *A clinical and genetical study of anencephaly.*—By J. A. Böök and S. Rayner.—The propositi for this study were 67 cases of anencephaly born in the Obstetric Departments of Lund and Malmö; the families of 46 of these were investigated. Among 88 live and stillborn siblings one case of spina bifida was found; but there were also 20 examples of spontaneous abortion in these sibships; this is a significantly higher rate than in a control group. The authors suggest that these abortions may represent further cases of the deformity and that anencephaly may be due to a recessive gene. They found no effect of maternal age on the incidence of the malformation and no significant effect of birth order.

6. *The rare gene r^v (CdE).*—By L. N. Sussman and N. Wald.—The rare gene r^v (CdE) was found in a family and traced through three generations.

C. O. C.

FROM THE PRESS CUTTINGS

Atomic Energy

Industrial atomic energy is becoming an urgent problem for the world because of the impending shortage of coal, said Sir George Thomson, Nobel Prize winner.

He was addressing a conference called by the Institute of Biology, the Atomic Scientists' Association and the British Association at the Royal Institution to discuss the hazards to human beings of atomic energy.

The shortage, he explained, would not be due to the failure of supplies but to the world-wide decline in the recruitment of miners. Coal would rise to a prohibitive cost.

" Our modern civilization depends entirely on power," said Sir George. " Without it we would be completely sunk."

Professor K. Mather, of Birmingham, dealing with the hereditary effect of atomic rays, said that the changes produced in the genes, or hereditary factors, by irradiation would be almost invariably bad.

" If you murder a gene," he said, " murder will out, not in this generation, but maybe in the next generation and certainly in generations to come."

Lord Boyd Orr, who presided at the final session, said : " Science has given men the power of the ancient gods without giving them their wisdom."

He urged that scientists should go out explaining the possibilities and the risks not only of atomic energy but of biological substances which were much more dangerous in war even than the atomic bomb.[1]

Bishop Barnes' Speech to the British Association

Once again Dr. E. W. Barnes, Bishop of Birmingham, has set the country arguing—this time because of his defence of mercy killing before the British Association.

In clubs and pubs, in railway carriages and over the coffee cups men and women have been talking about the bishop's statement :

" He who has heard the call, ' Take and love thy neighbour as thyself,' may without hypocrisy approve of bringing human life to an end when the burden has become intolerable."

Dr. Barnes also said in his speech that he could find nothing in Christ's teaching to cause us " to welcome unrestricted population increase when its direct outcome is a vast growth of human misery."

Subsequently Dr. C. Killick Millard, of Leicester, founder and honorary secretary of the Voluntary Euthanasia Legalisation Society, which has 1,400 members, said he welcomed Dr. Barnes' distinguished support especially because he showed the ethical basis of euthanasia (mercy killing).

" If, however, the object is to reduce the population of an overcrowded world," Dr. Millard added, " then euthanasia could never have the effect of birth control, for the number of cases that would qualify for euthanasia would never be large."

Lord Horder, one of the country's greatest doctors and president of the *Eugenics Society*, said flatly he was an opponent of euthanasia. " Overpopulation can be biologically controlled," he said.

" There are two answers to the Bishop of Birmingham. One is contraception, and the other is to grow more food. That is the case against euthanasia in a nutshell."

Father A. Bonnar, O.F.M., D.D., M.Sc., of Cambridge, chaplain to the Catholic Medical Guild, said :

" Dr. Barnes has been saying the same things for 25 years. He is not a scientist and has no authority, even that of scholarship, to speak on the subject.

" What is the perfect human type we should aim at ? Is it physical, moral, or what ? What competence has Dr. Barnes to say what type is preferable ?

" Dr. Barnes is no theologian—he is a mathematician. If he had studied the B.M.A. Committee's report of 1930 and the *Brock Parliamentary Report* of 1932 he would be less dogmatic.

" As to the sufficiency of food in the world, does not Dr. Salaman, British Association lecturer on the potato, give a different picture ?

" It is a strange mentality that objects to mass extinction by atom bomb, but does not object to extinction by euthanasia and sterilization."

Readers joined in the controversy. One letter reads as follows :

Miss M. A. Doughty, B.Sc., Sydenham Park, London, S.E. :

" It has always been the proud boast of Christians that their religion encouraged them to comfort the afflicted, heal the sick, nurse the feeble-minded, relieve the oppressed, and give consolation to the dying.

" According to Dr. Barnes we should have speeded their journey into eternity without fuss or bother, so that men of superior quality could have more of the world's goods.

" Presumably Dr. Barnes reproves Christ for healing the lepers."[2]

Genetic Weakness

" We have no test of any sort which will tell if a person is a ' carrier ' of a genetic weakness. We can only tell when the offspring is affected by the weakness," Dr. A. G. Mearns, Senior Lecturer and Examiner in Public Health in the University of Glasgow, recently pointed out, when discussing possible solutions to the problem of the propaga-

tion of people with mental or physical deficiencies. He was speaking at the summer school of the Scottish Council for Health Education at St. Andrews University.

It had to be remembered that sterilization was in the end only a short-term policy, and he did not deny that in some cases it might be a good thing. It carried the important idea with it that defective people might want to marry.

In some cases there was reason why we should adopt sterilization, but it had been estimated that if we were to sterilize all the defectives, so as to prevent propagation, it would take 68 generations to root out a defect, and that would take 2,000 years. Even then sterilization might not necessarily eliminate a weakness. Another aspect was that sterilization would have to be applied on a world-wide scale, because of inter-marriage between people of different nations.

Discussing the care of defectives, he said that a policy of socialization was desirable, to get the best out of everybody, physically and mentally. Another important step was to have accurate information.

The long-term policy was eugenics. In order to achieve results we must have vast amounts of data of all kinds, and we must understand fully the principles of practical genetics. The accumulation of data must be on an international scale, which meant an international language.

Such a series of symbols, easily understood by men and women of many different nations, was being evolved by the *Eugenics Society* for the compilation of pedigree schedules.

Another problem was criteria, and the *Eugenics Society* had laid down six which might be applicable to man. They were: genetic purity; sound physique; good health; intelligence; love of children; social awareness. To these Dr. Mearns said there might be added humanitarianism, love of beauty, and understanding of the other's point of view.[2]

The Legality of Sterilization

In a recent letter to the *New Statesman* Dr. Norman Haire, President of the Sex Education Society, wrote:

"I must not be misinterpreted as suggesting that sterilization, though lawful, should be carried out lightly or frivolously. A young man or woman may be quite convinced that he or she will never want to have any children, but circumstances may change, and a change of mind may follow, later on. A man may decide that he wants to be sterilized because his wife does not want children. But that wife may die, or the couple may divorce, and he may want to marry again, and the new wife may be anxious to have children. The same thing may occur to a wife who wants to be sterilized because her husband does not want children. These are not just theoretical possibilities—I have seen such cases in my own experience. Any conscientious surgeon, therefore, will consider well, and insist on the applicant for sterilization considering well, before he agrees to carry out such an operation. But his hesitation should be based, in such a case, on ethical, not on legal, grounds."

Mr. C. H. Rolph replied: "Dr. Haire thinks that sterilization, practised by a competent surgeon on a validly consenting patient, is lawful whether or not there is any question of preserving life or health. I think it is probably unlawful, and that the ancient charge of 'mayhem' might be resuscitated to meet the case. (It is still alive: it was used during the war against a butcher's boy who cut off his fingers to avoid military service.) Castration, as I said, was once held to be mayhem, not because it disfigured a man but because it deprived the country of his sons. On what grounds would an operation having the same consequences be judged differently to-day? Dr. Haire's case, if I understand it aright, collapses at the opening of his fifth paragraph, where he betrays a total misunderstanding of 'mayhem' by relating it to consent. The number of socially compassionate surgeons who 'qualify for imprisonment' on these and other grounds is a reflection on our criminal law, not on me."[4]

Population of French West Africa

According to the latest figures, French West Africa has about 51,760 Europeans. Dakar has approximately a third—17,460—and Senegal and the Ivory Coast about one-sixth each. Mauritania is estimated to have 420 Europeans, the Haute-Volta, 1,980, Guinea 5,850, Dahomey 1,790, Soudan 6,300 and the Niger 1,130. Estimates place African population at over sixteen and a half million in 4,596,000 square kilometres (456 per square kilometre) in French West Africa. Dakar has 228,000, Senegal 1,764,000 (8.4 per square kilometre), Soudan, 3,176,700 (2.6 per square kilometre), Mauritania, 517,900 (0.5 per square kilometre), Guinea, 2,180,000 (7.7 per square kilometre), the Ivory Coast 2,065,000 (6.1 per square kilometre), Haute-Volta, 3,069,500 (9.7 per square kilometre), Dahomey, 1,505,000 (12.9 per square kilometre), Niger, 2,029,200 (1.5 per square kilometre).[5]

[1] *News Chronicle*, October 23rd; [2] *News Chronicle*, September 6th; [3] *Scotsman*, August 5th; [4] *New Statesman*, June 17th; [5] *West Africa*, October 14th.

"Galtonia candicans," which is reproduced on the front page of the cover, is a flowering plant named in honour of Sir Francis Galton in 1880 by Professor J. Decaisne of the Paris Museum of Natural History.

EUGENICS SOCIETY.